PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

Duke Energy Vermillion, L.L.C.
Southwest Quadrant of Intersection CR300N and SR63
Eugene Township, Indiana 47928

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T 165-14185-00022	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date:May 14, 2003 Expiration Date:May 14, 2008

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary 640 MW merchant power plant source.

Responsible Official:	Senior Vice President
Contact Person:	Rob Whitehead
Source Address:	SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address:	c/o Steve Pearl, 1000 E. Main, Plainfield, IN 46168
General Source Phone Number:	765-492-5030
Responsible Official Phone Number:	713-627-4633
Contact Person Phone Number:	317-838-1758
SIC Code:	4911
County Location:	Vermillion
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, utilizing diesel fuel as back-up fuel, controlled by low-NO_X combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage, exhausting to stacks designated as # 1- # 8,with a maximum heat input capacity of 1,272 million British thermal units per hour each, and a nominal output of 80 MW, each.

(b) Two (2) emergency diesel generators, identified as units #9 and #10, installed in 2000, exhausting to stacks designated as #9 and #10, with a maximum heat input capacity of 17.21 million British thermal units per hour, each.

(c) One (1) emergency diesel fire pump, identified as unit #11, installed in 2000, exhausting to stack designated as #11, with a maximum heat input capacity of 1.6 million British thermal units per hour.

(d) Four (4) diesel fuel storage tanks, identified as tanks #1 through #4, exhausting to vents designated as #12 through #15, with a maximum capacity of 519, 000 gallons of diesel fuel per tank, and a maximum volume of 69,400 cubic feet per tank.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

Paved and unpaved roads and parking lots with public access. (326 IAC 6-4)

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);

(c) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

(c) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(b) Noncompliance with any provisions of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.

(c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee

is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12][40 CFR 72]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]

(c) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20 (b), (c), or (e) and makes such records available, upon reasonable request, for

public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy any records that must be kept under the conditions of this permit;

(c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233- 4230 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P] [326 IAC 6-3-2]

(a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control

The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.11 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.12 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

(b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(c) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or is down for maintenance or repairs, the following shall be used as an alternative to continuous data collection:

(1) If the CEM is required for monitoring NOx emissions pursuant to 40 CFR 75 (Title IV Acid Rain program) or 326 IAC 10-4 (NOX Budget Trading Program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.

(2) If the CEM is not used to monitor NOx emissions from a unit subject to requirements of the Title IV Acid Rain program or the NOX Budget Trading Program, and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented as specified in Section D of this permit until such time as the emission monitor system is back in operation.

(d) Whenever the CO continuous emission monitoring system is malfunctioning or down for repairs or adjustments, the Permittee shall use a data substitution procedure for the CO CEMs that is consistent with the requirements of 40 CFR 75.33(b), Standard Missing Data Substitution Procedures for SO_2 Concentration Data.

(e) Nothing in this condition, or in Section D of this permit, shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring equipment system pursuant to 326 IAC 10-4 and 326 IAC 3-5.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on September 11, 2000.

(b) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(c) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP);

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and imple-

ment additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within “normal” parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate estimated actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible

official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Eight (8) Simple Cycle Turbines

(a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, utilizing diesel fuel as back-up fuel, controlled by low-NO_X combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage, exhausting to stacks designated as # 1 - # 8,with a maximum heat input capacity of 1,272 million British thermal units per hour each, and a nominal output of 80 MW, each.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart GG.

D.1.2 Nitrogen Oxides (NO_X) - Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

(a) Use with dry low-NO_X combustors in conjunction with natural gas;

(b) Use wet-injection in conjunction with diesel fuel;

(c) When burning natural gas the NO_X emission rate shall not exceed a one (1) hour average concentration of fifteen (15) parts per million (ppmvd) of NO_X at fifteen (15%) percent O_2 in conjunction with dry low-NO_X combustors;

(d) When burning natural gas, the NO_X emission rate shall not exceed twelve (12) parts per million (ppmvd) of NO_X per year based over twelve (12) consecutive months of operation at fifteen (15%) percent O_2 in conjunction with dry low-NO_X combustors;

(e) When burning diesel fuel the NO_X emission rate shall not exceed a one (1) hour average concentration of forty-two (42) parts per million (ppmvd) of NO_X at fifteen (15%) percent O_2 in conjunction with wet-injection;

(f) The total input of the natural gas fuel to the eight (8) combustion turbines shall be limited to 20,336 million cubic feet per twelve (12) consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 426.0 tons of NO_X per year. If diesel fuel oil is combusted during any portion of a twelve (12) consecutive month period, natural gas usage shall be reduced such that NO_X emissions for the eight (8) turbines do not exceed 732.8 tons per year for gas and oil firing combined, as determined by CEMS.

D.1.3 Sulfur Dioxide (SO_2) - Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

(a) Use natural gas as the primary fuel for the combustion turbines;

(b) The sulfur content of the diesel fuel used by the combustion turbines shall not exceed 0.05 percent by weight; and

(c) Use only diesel fuel oil as a back-up fuel source. The total input of the diesel fuel to the eight (8) combustion turbines shall be limited to 34,000 kilo-gallons per twelve (12) consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 116.0 tons of SO_2 per year and 392.0 tons of NO_X per year.

D.1.4 Carbon Monoxide (CO) - Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

(a) Combustion control maintaining the following emission limits:

(1) The CO emission rate shall not exceed a one (1) hour average concentration of twenty-five (25) parts per million (ppmvd) of CO at fifteen (15%) percent O_2 in conjunction with firing natural gas at operating loads above fifty (50%) percent; and

(2) The CO emission rate shall not exceed a one (1) hour average concentration of twenty (20) parts per million (ppmvd) of CO at fifteen (15%) percent O_2 in conjunction with firing diesel fuel at operating loads above fifty (50%) percent.

(b) Perform good combustion practices.

D.1.5 Volatile Organic Compounds (VOC) - Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the eight (8) combustion turbines shall perform good combustion practices.

D.1.6 Particulate Matter (PM/PM_{10}) - Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

(a) Natural gas as primary fuel;

(b) Limit diesel fuel as established under the SO_2 BACT analysis; and

(c) Perform good combustion practices.

D.1.7 Startup/Shutdown Limits [40 CFR 52.21] [326 IAC 2-2]

Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003:

(a) Startup is defined as the period of time from the inititation of combustion firing from a "cold start" operating condition to the attainment of steady-state operating conditon.

(b) Shutdown is defined as that period of time from the initial lowering of the turbine output to the complete cessation of fuel combustion in the unit witht he intent to shutdown to a "cold

stop" condition.

(c) A startup/shutdown cycle is a pair of subsequent shutdown and startup events (i.e., one startup followed by one shutdown represents one startup/shutdown cycle).

(d) Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003, and 326 IAC 2-2 (PSD Requirements), the Permitee shall meet the following startup and shutdown limits:

(1) The maximum number of startup/shutdown cycles shall not exceed 240 per 12 consecutive months period rolled on a monthly basis as determined at the end of each calendar month. The duration of each startup/shutdown cycle shall not exceed one (1) hour.

(2) When firing natural gas:

(A) The NOx emissions per turbine shall not exceed:
(i) 20.7 lbs per each startup
(ii) 11.0 lbs per each shutdown

(B) The CO emissions per turbine shall not exceed:
(i) 65.5 lbs per each startup
(ii) 58.9 lbs per each shutdown

(3) When firing Distillate oil:

(A) The NOx emissions per turbine shall not exceed:
(i) 31.6 lbs per each startup
(ii) 17.5 lbs per each shutdown

(B) The CO emissions per turbine shall not exceed:
(i) 76.4 lbs per each startup
(ii) 65.5 lbs per each shutdown

D.1.8 Non-Criteria PSD Pollutants (Beryllium and H_2SO_4) - Best Available Control Technology for the Eight (8) Combustion Turbines [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the eight (8) combustion turbines shall comply with the following BACT:

(a) Use natural gas as the primary fuel for the combustion turbines;

(b) The sulfur content of the diesel fuel used by the combustion turbines shall not exceed 0.05 percent by weight; and

(c) Perform good combustion practices.

D.1.9 Stationary Gas Turbines [40 CFR Part 60, Subpart GG]

(a) The eight (8) combustion turbines are subject to 40 CFR Part 60, Subpart GG because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.

(b) Pursuant to 326 IAC 12-1 and 40 CFR 60, Subpart GG (Stationary Gas Turbines), the Permittee shall:

(1) Limit nitrogen oxides emissions, as required by 40 CFR 60.332, to:

$$STD = 0.0075 \frac{(14.4)}{Y} + F,$$

where STD = allowable NO_x emissions (percent by volume at 15 percent oxygen on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peck load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of 40 CFR 60.332.

(2) Limit sulfur dioxide emissions, as required by 40 CFR 60.333, to 0.015 percent by volume at fifteen (15%) percent oxygen on a dry basis, or use natural gas fuel with a sulfur content less than or equal to 0.8 percent by weight.

D.1.10 Sulfur Dioxide Emission Limitations [326 IAC 7-1]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 7-1.1-2, the sulfur dioxide emissions from the eight (8) turbines, shall not exceed 0.5 pounds per million British thermal units for distillate oil combustion.

D.1.11 Carbon Monoxide Emission Limitations [326 IAC 9-1]

This source is subject to 326 IAC 9-1 because it is a stationary source of CO emissions commencing operation after March 21, 1972. There are no applicable CO emission limits, under this state rule, established for this type of operation.

D.1.12 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the eight (8) simple cycle combustion turbines and their control devices.

Compliance Determination Requirements

D.1.13 Sulfur Content Compliance [326 IAC 7-2]

(a) Pursuant to 326 IAC 7-2-1, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed 0.5 pounds per million British thermal units per hour by:

(1) Fuel sampling and analysis data shall be collected pursuant to procedures specified in 326 IAC 3-7-4 for oil combustion and shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million British thermal units per hour unless a shorter averaging time or alternate methodology is specified under 326 IAC 7-2. Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the eight (8) combustion turbines, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or

(3) Upon written notification of a facility owner or operator to the department, continu-

ous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance.

(b) A determination of noncompliance pursuant to either of the methods specified in (1), (2) or (3) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.14 Nitrogen Oxides Monitoring Requirement [326 IAC 10-4-4(b)(1)] [326 IAC 10-4-12(b) and (c)] [40 CFR 75]

The Permittee shall meet the monitoring requirements of 326 IAC 10-4-12(b)(1) through (b)(3) that are applicable to their monitoring systems for the NOx budget units on or before May 1, 2003. The Permittee shall record, report, and quality assure the data from the monitoring systems on and after May 1, 2003 in accordance with 326 IAC 10-4-12 and 40 CFR 75.

D.1.15 Compliance Requirements [40 CFR Part 60, Subpart GG]

Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee must comply with the following custom fuel monitoring schedule approved by the EPA on May 30, 2000:

(a) Monitor the sulfur content of the natural gas being fired in the turbine by ASTM method D 5504-94, or one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82.

(b) Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.

As soon as the Permittee installs the equipment capable of using low sulfur (0.05%) distillate oil as the backup fuel, monitoring of fuel nitrogen content will be required pursuant to 40 CFR 60.334(b).

(c) Sulfur Monitoring

(1) Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The approved alterative method is ASTM Method D5504-94.

(2) Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six (6) months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted one per quarter for six quarters.

(3) If after the monitoring required in item c(2) above, or herein, the sulfur content of the fuel shows little variability and calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.

(4) Should any sulfur analysis as required in items c(2) or c(3) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the U.S. EPA Region V Air and Radiation Division of such excess emissions and the custom schedule shall be re-examined by the U.S. EPA. Sulfur monitoring shall be con-

ducted weekly during the interim period when this custom schedule is being re-examined.

(d) If there is change in fuel supply, the owner or operator must notify the EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

(e) Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state and local air pollution control agencies.

D.1.16 Continuous Emission Monitoring System (CEMS) [326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a source with an emission limitation or permit requirement established under 326 IAC 2-2 shall be required to install a continuous emissions monitoring system or alternative monitoring plan as allowed under the Clean Air Act and 326 IAC 3-5.

(b) Pursuant to PSD Permit CP 165-10476-00022, issued on July 1,1999, for NO_X and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system for stacks designated as # 1 - # 8 in accordance with 326 IAC 3-5-2 and 3-5-3.

(1) The continuous emission monitoring system (CEMS) shall measure NO_X and CO emissions rates in pounds per hour and parts per million (ppmvd). The use of CEMS to measure and record the NO_X and CO hourly limits, is sufficient to demonstrate compliance with the fifteen (15) parts per million (ppmvd) NO_X limit and twenty-five (25) parts per million (ppmvd) CO limit, when firing natural gas, and the forty-two (42) parts per million NO_X limit, in conjunction with wet-injection, and twenty (20) parts per million CO limit, when firing diesel fuel, at operating loads above fifty (50) percent. To demonstrate compliance with the twelve (12) parts per million (ppmvd) NO_X annual limit, the source shall average the parts per million (ppmvd) over a twelve (12) consecutive month period.

(2) The CEMS shall be in operation at all times when the eight (8) turbines are in operation.

(3) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

(c) The Permittee shall follow parametric monitoring requirements for determining SO_2 emissions contained in the "*Optional SO_2 Emissions Data Protocol for Gas-Fired and Oil-Fired Units"* in lieu of continue monitoring emissions monitors (CEMS).

(1) Pursuant to the procedures contained in 40 CFR 75.20, the Permittee shall complete all testing requirements to certify the use of the *"Optional SO_2 Emissions Data Protocol for Gas-Fired and Oil-Fired Units"* protocol.

(2) The Permittee shall apply to IDEM for initial certification to use the *"Optional* SO_2 *Emissions Data Protocol for Gas-Fired and Oil-Fired Units"* protocol, no later than 45 days after the compliance of all certification tests. The initial plan was received by the IDEM/OAQ on March 7, 2000.

(3) All certification and compliance methods shall be conducted in accordance with the

procedures outlined in 40 CFR Part 75, Appendix D.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.17 Visible Emissions Notations

(a) Visible emission notations of the combustion turbine stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere when burning diesel fuel. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.18 Compliance Requirements [40 CFR Part 60, Subpart GG]

Pursuant to 40 CFR Part 60, Subpart GG, the Permittee shall operate a Continuous Monitoring System to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.19 Record Keeping Requirements

(a) To document compliance with Conditions D.1.2, D.1.3, D.1.4, D.1.6, D.1.8, D.1.9 and D.1.10, the Permittee shall maintain records of the following:

(1) Amount of diesel fuel combusted (in gallons) per turbine during each month;

(2) Amount of natural gas combusted (in million cubic feet) per turbine during each month;

(3) The percent sulfur content of the diesel fuel; and

(4) The heat input capacity of each turbine.

(b) To document compliance with Conditions D.1.2 and D.1.4, the Permittee shall record the emission rates of NO_X and CO in parts per million (ppmvd) based on a hourly and monthly average. The source shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

(c) Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003, to document compliance with Condition D.1.7, the Permittee shall maintain records of the following:

(1) The type of operation (startup or shutdown) with supporting operational data.

(2) The total number of minutes for startup and shutdown per 24-hour period per turbine.

(3) The fuel flow meter data and Method 19 calculations corresponding to each startup and shutdown period.

(d) To document compliance with Condition D.1.17, the Permittee shall maintain records of visible emission notations of the eight (8) combustion turbine stack exhausts once per shift when burning diesel fuel.

(e) To document compliance with Condition D.1.18, the Permittee shall record the fuel consumption and the ratio of water to fuel being fired in each turbine.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.20 NSPS Reporting Requirement

Pursuant to the New Source Performance Standards (NSPS), Part 60.330, Subpart GG, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

(a) Date of performance testing (at least thirty (30) days prior to such date), when required by a condition elsewhere in this permit; and

(b) Report periods of excess emissions, as required by 40 CFR 60.334(c).

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

D.1.21 Reporting Requirements

(a) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for NO_X and CO, pursuant to 326 IAC 3-5-7 and 40 CFR 60.334(c). These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit.

(b) Pursuant to 326 IAC 7-2-1, owners or operators of sources or facilities subject to 326 IAC 7-2-1 or 326 IAC 7-4, shall submit to the Commissioner the following reports based on fuel sampling and analysis data in accordance with procedures specified under 326 IAC 3-7:

Shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million British thermal units upon request.

(c) A quarterly summary of the information to document compliance with Conditions D.1.2 and D.1.3 shall be submitted to the address listed in Section C - General Reporting Require-

ments, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) A quarterly summary of the total number of startup and shutdown hours of operation and emissions corresponding to startup and shutdown to document compliance with Condition D.1.7, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Two (2) Emergency Generators and Fire Pump

(b) Two (2) emergency diesel generators, identified as units #9 and #10, installed in 2000, exhausting to stacks designated as #9 and #10, with a maximum heat input capacity of 17.21 million British thermal units per hour, each.

(c) One (1) emergency diesel fire pump, identified as unit #11, installed in 2000, exhausting to stack designated as #11, with a maximum heat input capacity of 1.6 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Nitrogen Oxides (NO_X) - Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the source shall perform good combustion practices as BACT.

D.2.2 Sulfur Dioxide (SO_2) - Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the source shall comply to the following BACT:

(a) Perform good combustion practices;

(b) The sulfur content of the diesel fuel used by the generators shall not exceed 0.05 percent by weight; and

(c) The total input of the diesel fuel to the generators shall be limited to 6,029 gallons per day and shall not exceed a total of 125,620 gallons per twelve consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 0.435 tons of SO_2 per year and 27.5 tons of NO_X per year.

D.2.3 Carbon Monoxide (CO) - Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the source shall perform good combustion practices as BACT.

D.2.4 Particulate Matter (PM/PM_{10}) - Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the source shall comply with the following BACT:

(a) The limit of diesel fuel established under the SO_2 BACT analysis; and

(b) Perform good combustion practices.

D.2.5 Best Available Control Technology for the Emergency Diesel Fire Pump [326 IAC 2-2-3]

Pursuant to CP 165-10476-00022, issued on July 1, 1999, and 326 IAC 2-2-3 (PSD - Control Technology Review Requirements), the source shall comply with the following BACT:

(a) Perform good combustion practices;

(b) The sulfur content of the diesel fuel used by the fire pump shall not exceed 0.05 percent by weight; and

(c) The total input of the diesel fuel to the fire pump shall be limited to 5,840 gallons per twelve consecutive month period, rolled on a monthly basis.

D.2.6 Nonapplicability of Sulfur Dioxide (SO_2) - Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

The requirement from MPR 165-11417-00022, issued February 25, 2000, Condition D.1.9 which requires a diesel fuel limit of 3,014.7 gallons per day and 125,600 gallons per twelve (12) consecutive month period, rolled on a monthly basis, has not been included in the Title V operating permit. This requirement is no longer applicable because the calculation of the diesel fuel usage limitation was incorrect. A new diesel fuel usage limitation is described in this permit in Condition D.2.2. Thus, Condition D.1.9 of MPR 165-11417-00022 is hereby rescinded.

Compliance Determination Requirements

D.2.7 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) emergency diesel fired generators, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.8 Record Keeping Requirements

(a) To document compliance with Conditions D.2.2, D.2.4, and D.2.5, the Permittee shall maintain records of the following:

(1) Amount of diesel fuel combusted per unit (in gallons) during each month; and

(2) The percent sulfur content of diesel fuel.

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(3) Fuel supplier certifications;

(4) The name of the fuel supplier; and

(5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.2 and D.2.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Four (4) Storage Tanks

(d) Four (4) diesel fuel storage tanks, identified as tanks #1 through #4, exhausting to vents designated as #12 through #15, with a maximum capacity of 519, 000 gallons of diesel fuel per tank, and a maximum volume of 69,400 cubic feet per tank.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60 Subpart Kb.

D.3.2 Volatile Organic Storage Vessels [40 CFR Part 60, Subpart Kb]

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall notify the Administrator and the Office of Air Management within thirty (30) days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. (Available data on the storage temperature may be used to determine the maximum vapor pressure as determined in 40 CFR Part 60.117b(e)(1) - (3)).

Compliance Determination Requirements

There are no specific Compliance Determination Requirements applicable to these emission units.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

There are no specific Compliance Monitoring Requirements applicable to these emission units.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.3 Record Keeping Requirements

(a) To document compliance with Condition D.3.2, the Permittee shall:

(1) Maintain the records of the volatile organic liquid (VOL) stored;

(2) The period of storage;

(3) The maximum true vapor pressure of the volatile organic liquid (VOL) during the respective storage period; and

(4) Shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION E TITLE IV CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Eight (8) simple cycle turbines

(a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, utilizing diesel fuel as back-up fuel, controlled by low-NO_X combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage, exhausting to stacks designated as # 1- # 8,with a maximum heat input capacity of 1,272 million British thermal units per hour each, and a nominal output of 80 MW, each.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Acid Rain Program

E.1 Acid Rain Permit [326 IAC 2-7-5(1)(C)] [326 IAC 21] [40 CFR 72 through 40 CFR 78]

(a) The attached Acid Rain permit for this source, AR 165-10727-00022, issued on April 4, 2000, is incorporated by reference into this Part 70 permit. Pursuant to 326 IAC 21 (Acid Deposition Control), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78.

(b) Where an applicable requirement of the Clean Air Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall apply.

E.2 Title IV Emissions Allowances [326 IAC 2-7-5(4)] [326 IAC 21]

Emissions exceeding any allowances that the Permittee lawfully holds under the Title IV Acid Rain Program of the Clean Air Act are prohibited, subject to the following limitations:

(a) No revision of this permit shall be required for increases in emissions that are authorized by allowances acquired under the Title IV Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement.

(b) No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not use allowances as a defense to noncompliance with any other applicable requirement.

(c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland, 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland, 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022

This form consists of 2 pages **Page 1 of 2**

9 This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_x, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland, 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: Eight (8) simple cycle combustion turbines
Parameter: Natural Gas fuel usage, only
Limit: 20,336 million cubic feet per twelve (12) consecutive month period (equivalent to 426.0 tons of NO_X per twelve (12) consecutive month period), total

YEAR: _____

Month	Natural Gas Usage (MMCF)	Natural Gas Usage for Previous 11 Months (MMCF)	Natural Gas Usage for Twelve-Month Period (MMCF)

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: Eight (8) simple cycle combustion turbines
Parameter: Diesel fuel usage
Limit: 34,000 kilo-gallons per twelve (12) consecutive month period (equivalent to 116.0 tons of SO_2, total) and 392 tons of NO_X.

YEAR: _____

Month	Diesel Fuel Oil Usage This Month (gallons)	Diesel Fuel Oil Usage for Previous 11 Months (gallons)	Diesel Fuel Oil Usage for Twelve-Month Period (gallons)

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: Two (2) emergency diesel generators
Parameter: Diesel fuel usage
Limit: 6,029 gallons per day, equivalent to 0.435 tons of SO_2 total per year.

Month: _____ Year: _____

Day	Diesel Fuel Oil Usage This Day (gallons)	Day	Diesel Fuel Oil Usage This Day (gallons)
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16		no. of deviations	

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: Two (2) emergency diesel generators
Parameter: Diesel fuel usage
Limit: 125,620 gallons per twelve (12) consecutive month period, equivalent to 27.5 tons of NO_X total per year.

YEAR: _____

Month	Diesel Fuel Oil Usage This Month (gallons)	Diesel Fuel Oil Usage for Previous 11 Months (gallons)	Diesel Fuel Oil Usage for Twelve-Month Period (gallons)

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: One (1) emergency diesel fire pump
Parameter: Diesel fuel usage
Limit: 5,840 gallons per twelve (12) consecutive month period.

YEAR: _____

Month	Diesel Fuel Oil Usage This Month (gallons)	Diesel Fuel Oil Usage for Previous 11 Months (gallons)	Diesel Fuel Oil Usage for Twelve-Month Period (gallons)

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section and Vermillion County Air Pollution Control
Quarterly Report

Company Name: Duke Energy Vermillion Generating Station
Location: CR 300N and SR 63 Eugene Township, IN 47928
Permit No.: CP-083-15845-00022
Source: Eight (8) natural gas combustion turbines operating in simple cycle
Limit: 240 hour startups/shutdowns per 12 consecutive month period.

Month:_____ Year _____
Total from previous month(s) Startup_____ Shutdown_____
Total hours per year for startup and shutdown for 12 month period

	Startup / Shutdown									Startup / Shutdown							
Day/ Turbine	1	2	3	4	5	6	7	8	Day/ Turbine	1	2	3	4	5	6	7	8
1									17								
2									18								
3									19								
4									20								
5									21								
6									22								
7									23								
8									24								
9									25								
10									26								
11									27								
12									28								
13									29								
14									30								
15									31								
16									Total								

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section and Vermillion County Air Pollution Control
Quarterly Report

Company Name: Duke Energy Vermillion Generating Station
Location: CR 300N and SR 63 Eugene Township, IN 47928
Permit No.: CP-083-15845-00022
Source: Eight (8) natural gas combustion turbines operating in simple cycle
Limit: Nat. Gas per turbine: NOx- 20.7 lb/startup &11.0 lb/shutdown; CO- 65.5 lb/startup & 58.9 lb/ shutdown
Diesel per turbine: NO_x- 31.6 lb/ startup & 17.5 lb/ shutdown; CO- 76.4 lb/ startup &65.5 lb/ shutdown

Month: Year _____
Total from previous month(s) Startup_____ Shutdown_____
Total hours per year for startup and shutdown for 12 month period

	Startup / Shutdown									Startup / Shutdown							
Day/ Turbine	1	2	3	4	5	6	7	8	Day/ Turbine	1	2	3	4	5	6	7	8
1									17								
2									18								
3									19								
4									20								
5									21								
6									22								
7									23								
8									24								
9									25								
10									26								
11									27								
12									28								
13									29								
14									30								
15									31								
16									Total								

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name:Duke Energy Vermillion, L.L.C.
Source Address:SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address:c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.:T 165-14185-00022

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".
9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.
9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: ______________________

Submitted by: ____

Title/Position: ____

Signature: ____

Date: ____

Phone: ____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Part 70 Operating Permit

Source Name: **Duke Energy Vermillion, L.L.C.**
Source Location: **Southwest Quadrant of Intersection CR300N and SR63, Eugene Township, IN 47928**
County: **Vermillion**
SIC Code: **4911**
Operation Permit No.: **T 165-14185-00022**
Permit Reviewer: **Craig J. Friederich**

On July 1, 2002, the Office of Air Quality (OAQ) had a notice published in the Daily Clintonian, Clinton, Indiana, stating that Duke Energy Vermillion, L.L.C. had applied for a Part 70 Operating Permit to operate a 640 MW merchant power plant. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating Permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Part 70 Operating Permit should be issued as proposed.

On July 30, 2002, Emmett W. Poindexter III, Manager, Environmental Affairs, Duke Energy, submitted comments on the proposed Part 70 Operating Permit. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded.**

Comment 1:

Section A Draft Permit

In Section A.1 (page 5 of 49) Steve Gilliland is referenced as the responsible official with an incorrect phone number. The correct phone number for Steve Gilliland is 713-627-4633. The contact person for information regarding the facility is Rob Whitehead and his phone number is 317-838-1758. The mailing address for Title V correspondence is c/o Steve Pearl, 1000 E. Main, Plainfield, IN 46168. The general facility phone number is 765-492-5030.

Response 1:

The phone number listed in Section A of the permit is the general source phone number, which may be different than the phone number for the responsible official. The title of the responsible official has replaced the name of the responsible official in Condition A.1. The responsible official's correct phone number, the contact person and his correct phone number, the correct mailing address, and the correct general source phone number have been added to Condition A.1.

In addition, the source status in Section A.1 has been revised because this source is a minor source under Section 112 of the Clean Air Act. The combination of the updated April 2000 emission factors for HAPs and the limit of 2,500 hours per year of operation, with no more than 500 hours per year of diesel fuel, for the eight (8) simple cycle combustion turbines has caused the limited potential to emit of a single HAP to be less than ten (10) tons per year and the limited potential to emit from a combination of HAPs to be less than twenty-five (25) tons per year. Therefore, Condition A.1 has been revised as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary 640 MW merchant power plant source.

Responsible Official:	~~Steven F. Gilliland~~ **Senior Vice President**
Contact Person:	**Rob Whitehead**
Mailing Address:	~~c/o Steven F. Gilliland, 5400 Westheimer Court, Houston, TX 77056-5310~~ **c/o Steve Pearl, 1000 E. Main, Plainfield, IN 46168**
General Source Phone Number:	~~713-627-5698~~ **765-492-5030**
Responsible Official Phone Number:	**713-627-4633**
Contact Person Phone Number:	**317-838-1758**
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; ~~Major~~ **Minor** Source, Section 112 of the Clean Air Act

Comment 2:

Section D Draft Permit

In section D, Condition D.1.14(a) (page 30) references only one ASTM method for sulfur content testing. Condition D.1.14(c)(1) allows for the use of one of several methods. The methods in (c)(1) should be incorporated into Condition D.1.14(a).

Response 2:

The custom fuel monitoring schedule approved by the U.S. EPA on May 30, 2000 allowed for the sulfur content of the natural gas being fired in the turbine to be monitored by ASTM method D5504-94 or one of the standard test methods listed under 40 CFR 60.335(d). Since the source is allowed to use one of several methods, Condition D.1.14(a) (now Condition D.1.15(a)) has been revised as follows:

D.1.1~~4~~**5** Compliance Requirements [40 CFR Part 60, Subpart GG]

Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee must comply with the following custom fuel monitoring schedule approved by the EPA on May 30, 2000:

(a) Monitor the sulfur content of the natural gas being fired in the turbine by ASTM method D 5504-94**, or one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels**. **The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82.**

Comment 3:

Condition D.1.14(b) (page 30) requires nitrogen content testing of the fuel oil. Also, Condition D.1.17 (page 32) requires monitoring of the water to fuel ratio under Subpart GG. In a letter dated May 25, 2000 from EPA Region V, a Custom Fuel Monitoring Schedule for natural gas firing has been approved. Vermillion Generating Station (VGS) has been following the alternative procedures noted in the referenced Custom Monitoring Schedule since the Station began operation. Once the fuel oil equipment installation is complete, Vermillion Generating Station (VGS) will submit a "Request for Custom Fuel Monitoring Schedule" for fuel nitrogen content and monitoring of the water to fuel ratio. Until this request is approved, Vermillion Generating Station (VGS) will meet the permit conditions referenced above.

Response 3:

There are no changes to the proposed permit as a result of this comment.

Comment 4:

Condition D.1.15(b)(1) (page 31) lists the hourly NO_X and CO limits as 15 ppmvd and 42 ppmvd, respectively. For gas firing, the correct permitted hourly CO limit is 25 ppmvd as referenced at Condition D.1.4(1)(a) of the PSD Permit. This also is listed in the TSD document incorrectly (page 11 of the TSD under state rule applicability –entire source continuous monitoring of emissions). Additionally, Condition D.1.15(b)(1) does not address NO_X or CO emissions during oil firing. The hourly limit for NO_X when burning oil is 42 ppmvd in conjunction with wet-injection. The CO emission limit is 20 ppmvd in conjunction with firing oil at operating loads above 50 percent. Also, the TSD continuous monitoring of emissions (page 11 of TSD) does not address NO_X and CO emissions during oil firing.

Response 4:

The IDEM, OAQ, prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and become part of the record regarding this permit decision. All changes required in the permit are addressed in this addendum to the TSD. As a result of this comment, Condition D.1.15(b) (now Condition D.1.16(b)) has been revised as follows to be consistent with the PSD Permit:

D.1.15~~6~~Continuous Emission Monitoring System (CEMS) [326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a source with an emission limitation or permit requirement established under 326 IAC ~~2-1-3(i)(8)~~ **2-2** shall be required to install a continuous emissions monitoring system or alternative monitoring plan as allowed under the Clean Air Act and 326 IAC 3-5.

(b) **Pursuant to PSD Permit CP 165-10476-00022, issued on July 1,1999,** for NO_X and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system for stacks designated as # 1 - # 8 in accordance with 326 IAC 3-5-2 and 3-5-3.

(1) The continuous emission monitoring system (CEMS) shall measure NO_X and CO emissions rates in pounds per hour and parts per million (ppmvd). The use of CEMS to measure and record the NO_X and CO hourly limits, is sufficient to demonstrate compliance with the fifteen (15) parts per million (ppmvd) NO_X limit and ~~forty-two (42)~~ **twenty-five (25)** parts per million (ppmvd) CO limit, **when firing natural gas, and the forty-two (42) parts per million NO_X limit, in conjunction with wet-injection, and twenty (20) parts per million CO limit, when firing diesel fuel, at operating loads above fifty (50) percent**. To demonstrate compliance with the twelve (12) parts per million (ppmvd) NO_X annual limit, the source shall average the parts per million (ppmvd) over a twelve (12) consecutive month period.

(2) The CEMS shall be in operation at all times when the eight (8) turbines are in operation.

(3) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

Comment 5:

Condition D.1.16(a) (page 31) requires a trained employee to observe and record whether visible emissions are "normal" or "abnormal" once per shift while firing fuel oil during normal daytime operations. This condition was not included in the original PSD permit. VGS is requesting clarification of terms used in the condition including "trained", "abnormal visible emissions" and "normal visible emissions", and to define the method to be used to observe the emissions. In addition, VGS is requesting the frequency listed in the condition be changed to either once per quarter or during a RATA instead of once per shift when firing oil.

Response 5:

As the condition states, a trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. This training does not need to include the training to become a certified opacity reader nor does the training need to be done by a certified opacity reader. The purpose of specifying that a "trained employee" perform the visible emissions notations is to make sure that the employee would know the difference between "normal" and "abnormal" visible emissions from the particular process. The OAQ believes that the definition of a "trained employee" is clear in the permit; therefore, no changes have been made to the permit in response to this comment.

"Normal visible emissions" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. The suggested wording would allow sporadic use of compliance monitoring, which would not accomplish the purpose of compliance monitoring. The OAQ believes that visible emissions notations once per operating shift are a reasonable requirement. Therefore, no changes have been made to this condition.

Comment 6:

Condition D.2.2 (page 34) has a fuel usage limit of 6,026 gallons per day for both emergency generators combined and an annual usage limit of 251,090 gallons per year. Based on our calculations, these limits should be 6,029 gallons per day and 251,240 gallons per year. The calculations in the TSD indicate that rounding used in the TSD and in the Draft Permit led to this error. In addition, the quarterly report forms for the emergency generators reference these same fuel usage limitations. Page 45 references 6,026 gallons per day. As above this should be 6,029 gallons per day. Page 46 references 251,090 gallons per year which should be 251,240 gallons per year. The 6,026 gallons per day and the 215, 090 are calculated on pages 2 and 3 of the TSD, respectively.

Response 6:

Due to rounding, the fuel usage limit for the two (2) emergency diesel generators was incorrect. The correct limit should be 6,029 gallons per day, not to exceed to 125,620 gallons per year, as shown in the following calculation:

Daily limit calculation:

34.42 mmBtu/hr /0.137 mmBtu/gal = 251.24 gallons per hour X 24 hours/day=
6,029 gallons per day.

Twelve (12) consecutive month period limit calculation:

251.24 gallons per hour X 500 hours of operation per year= 125,620 gallons per twelve (12) consecutive month period rolled on a monthly basis.

Please note that the original gallons per twelve (12) consecutive month period limit of 251,090 was calculated in error because it assumed the total heat input capacity of both generators operating at 1,000 hours per year. The proper calculation applies the combined heat input capacity of 34.42 million British thermal units per hour (17.21 each) for the annual limit of 500 hours of operation. This does not change the limited use of these generators but corrects the fuel usage equivalent to the limited hours of operation.

The following calculations demonstrate the combined equivalent SO_2 and NO_X emissions for the fuel limit which represents the 500 hours of operation limit for each generator:

125,620 gal/yr x .0069 lbs SO_2 /gal x 1 ton/2,000 lbs = 0.435 tons per year of SO_2.

125,620 gal/yr x 0.4384 lbs NO_X /gal x 1 ton/2,000 lbs = 27.5 tons per year of NO_X.

Therefore, Condition D.2.2 and the associated quarterly report forms, shown at the end of the document, have been revised as follows:

D.2.2 Sulfur Dioxide (SO_2) - Best Available Control Technology for the Two (2) Emergency Diesel Generators [326 IAC 2-2-3]

(c) The total input of the diesel fuel to the generators shall be limited to ~~6,026~~ **6,029** gallons per day and shall not exceed a total of ~~251,090~~ **125, 620** gallons per twelve consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to ~~0.434~~ **0.435** tons of SO_2 per year and 27.5 tons of NO_X per year.

Comment 7:

In Section D, Condition D.2.7 (page 35) requires fuel oil sampling for the emergency generators while Condition D.2.8 (pages 35-36) allows for vendor certification. VGS is requesting that Condition D.2.7 be eliminated and that Condition D.2.8 be used to demonstrate compliance with the fuel oil sulfur content for the emergency equipment.

Response 7:

Condition D.2.7 has been revised to allow the Permittee to verify the fuel oil sulfur content of the emergency generator fuel oil, by either fuel sampling and analysis or by vendor certification. The PSD permit only required fuel oil sampling for the eight (8) combustion turbines and not for the two (2) emergency generators. The revised condition is as follows:

~~D.2.7 Sulfur Content Compliance [326 IAC 2-2-3]~~

~~Pursuant to 326 IAC 2-2-3, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed 0.05 percent by weight by:~~

~~Fuel sampling and analysis data shall be collected pursuant to procedures specified in 326 IAC 3-7-4 for oil combustion and shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million British thermal units per hour unless a shorter averaging time or alternate methodology is specified under 326 IAC 2-2-3. Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.~~

~~(a) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and~~

~~(b) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.~~

D.2.7 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or;

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) emergency diesel fired generators, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Comment 8:

Condition D.3.4 (page 38) provides notification requirements if performance testing is required for the four 519,000 gallon fuel oil storage tanks. Please note that there are no testing requirements for these tanks; therefore Condition D.3.4 is not required.

Response 8:

There is no testing for the four (4) 519,000 gallon fuel oil tanks, therefore, the NSPS reporting requirement is not necessary. Therefore, Condition D.3.4 has been deleted and the table of contents has been updated as follows:

~~D.3.4 NSPS Reporting Requirement~~

~~Pursuant to the New Source Performance Standards (NSPS), Part 60.110, Subpart Kb, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:~~

~~Date of performance testing (at least thirty (30) days prior to such date), when required by a condition elsewhere in this permit.~~

~~Reports are to be sent to:~~

~~Indiana Department of Environmental Management~~
~~Compliance Branch, Office of Air Quality~~
~~100 North Senate Avenue, P.O. Box 6015~~
~~Indianapolis, IN 46206-6015~~

~~The application and enforcement of these standards have been delegated to the IDEM OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.~~

Comment 9:

Technical Support Document

We have reviewed the calculations in the Technical Support Document.

The potential to emit (PTE) calculations used 8,760 hours operation for all pollutants (NO_X, CO, VOC, SO_2, and PM) in the TSD. The draft Title V emissions were based on 500 hours of operation for the emergency equipment (emergency generators and fire pump). The PTE calculations on the emergency equipment used 8,760 hours of operation per year in the PSD permit and associated TSD. As a result of the differing hours of operation, the Draft Title V TSD underestimates potential emissions. For example, the NO_X PTE is approximately 475 tons less in the draft Title V TSD as compared to the PSD Permit.

In the draft Title V, the VOC PTE adds in 0.46 tons for the tank emissions and 0.5 tons for insignificant sources, and the PM PTE adds in 1.0 tons for insignificant sources. This data appears to be correct, but may not have been included in the PSD TSD calculations.

A review of the potential to emit (PTE) HAP calculations indicate that the oil fired heat input was incorrectly used in the gas fired PTE. The worst case natural gas calculations used the oil firing heat input of 1,272 MMBtu/hr instead of the maximum gas heat input of 1,178 MMBtu/hr. In addition, the beryllium emissions listed are 100 times the correct value of 0.0138 tons per year, and the lead emissions listed are 10 times the correct value of 0.624 tons per year. Based on these revisions the correct PTE emissions would total 86.61 tons per year instead of 97.0 tons per year.

The limited potential to emit for the HAPs needs to be revised to reflect the correct emission factors for the natural gas and the correct factors for the beryllium and lead calculations. The total limited potential for HAPs should be 14.6 tons per year. Please note that the HAP factors have been revised since the submittal date of the PSD application/permit. The lb/MMBtu factors used for the draft Title V TSD document are the most current. Using the current emission factors, the facility is not a major source for HAPs. The calculated potential HAP emissions are less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAPs combined. Formaldehyde emissions, the HAP with the highest potential emissions, are now 8.4 tons per year for all eight turbines combined and 1.05 tons per year per turbine. Total potential HAP emissions are now 14.6 tons per year for all eight turbines and 1.83 tons per year per turbine.

The year 2000 actual emissions reported in the TSD are based on data submitted to IDEM with the required annual emissions inventory. After reviewing the source of the data, it has been discovered that there are some discrepancies in the emissions calculations. These have been discussed with IDEM, but have not yet been updated in IDEM's system. VGS will continue working with IDEM to

assure that the correct emissions are reported in IDEM's annual emissions inventory database.

Response 9:

The proposed Part 70 Operating Permit correctly based the potential to emit calculations for the emergency generators on 500 hours of operation, each. The PSD permit was incorrect to base the potential to emit for the emergency generators on 8,760 hours of operation since operations deemed "emergency" are only allowed to operate at 500 hours per year.

The table that specifies the potential to emit after issuance has also been revised for the two (2) emergency generators for SO_2 and PM. Due to rounding, the potential to emit SO_2 will increase 0.001 tons per year, from 0.434 to 0.435 tons per year and the potential to emit PM also increased 0.001 tons per year from 0.860 to 0.861. This is reflected in the potential to emit after issuance table below.

The PSD permit did not take into account emissions from the insignificant activities at the source. The VOC emissions were provided by the source using the US EPA's Tanks 4.0 program. Potential to emit from the remainder of the insignificant activities were estimated.

Page 1 of 3 of Appendix A to the TSD has been revised to reflect the proper heat input capacity of the eight (8) simple cycle, natural gas-fired combustion turbines, while operating on natural gas. These potential HAPs calculations have also been revised to cite the correct emission factors for Beryllium and Lead when burning diesel fuel. The updated calculations spreadsheet is attached and the revised potential to emit and limited potential emissions tables have been updated as follows:

Potential To Emit

HAPs	**Potential To Emit** (tons/year)
1,3 Butadiene	0.713
Acetaldehyde	1.~~78~~ **65**
Acrolein	0.2~~85~~ **64**
Benzene	2.45
Ethyl benzene	1.~~43~~ **32**
Formaldehyde	~~31.7~~ **29.3**
Naphthalene	1.56
PAH	1.78
Propylene Oxide	1.~~29~~ **20**
Toluene	5.~~79~~ **37**
Xylenes	2.~~85~~ **64**
Arsenic	0.490
Beryllium	~~1.38~~ **0.014**
Cadmium	0.214

HAPs	Potential To Emit (tons/year)
Chromium	0.490
Lead	~~6.24~~ **0.624**
Manganese	35.2
Mercury	0.053
Nickel	0.205
Selenium	1.11
TOTAL	~~97.0~~ **86.7**

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit.

	Limited Potential to Emit (tons/year)						
Process/facility	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPs**
Eight (8) Simple Cycle Turbines	60.0	60.0	121	36.5	540	733	~~16.0~~ **14.6**
Four (4) diesel fuel storage tanks	--	--	--	0.640	--	--	negligible
Two (2) Emergency Diesel Generators	~~0.860~~ **0.861**	0.493	~~0.434~~ **0.435**	0.774	7.31	27.5	0.00
One (1) Emergency Diesel Fire pump	0.040	0.023	0.020	0.036	0.342	1.29	0.00
Insignificant Activities	1.00	1.00	--	0.500	--	--	negligible
Total Emissions	61.9	61.5	122	38.5	548	762	~~16.0~~ **14.6**

The IDEM, OAQ has received the 2001 Annual Air Emission Inventory and Emissions Statement Report from Duke Energy Vermillion, L.L.C. The Actual Emissions table in the Technical Support Document has been updated as follows:

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the ~~2000~~ **2001** OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	~~25.0~~ **3.96**
PM_{10}	~~25.0~~ **3.29**
SO_2	~~1.00~~ **1.38**
VOC	~~22.0~~ **0.856**
CO	~~203~~ **12.2**
NO_X	~~47.0~~ **52.8**
~~HAP (specify)~~ **Lead**	~~not available~~ **4.6E-11**

Additional Comments received 9/30/02:

Comment 10:

The existing PSD permit for the facility (CP 165-10476-00022) does not address emissions during startups and shutdowns. As a result, Duke Energy Vermillion submitted a request for a permit revision and IDEM has drafted a revised permit to include limitations for periods of startup and shutdown. In the meantime, the Title V permit should reflect the fact that the short-term emission limits in the current permit do not apply during periods of startup and shutdown (as defined in the draft permit). Therefore, please add the following sentence in Section D.1 of the draft permit:

"The existing PSD permit for the facility (CP 165-10476-00022) is being revised to include limitations for periods of startup and shutdown. In the meantime, the emission limits (i.e., 1 hour average ppm for CO and NO_X, 12 month rolling average for No_X) specified in the permit do not apply during periods of startup and shutdown."

Response 10:

It is duly noted that the source has requested a revision to include limitations for startup and shutdown. These changes were incorporated in Significant Source Modification 165-15845-00022, issued March 13, 2003.

The IDEM, OAQ has incorporated the following conditions from the Significant Source Modification (165-15845-00022) to the PSD Permit into the proposed Part 70 Operating Permit:

Change 1:

Condition D.1.7 has been added as follows to incorporate startup and shutdown limits. All subsequent D conditions have been re-numbered:

D.1.7 Startup/Shutdown Limits [40 CFR 52.21] [326 IAC 2-2]

Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003:

(a) Startup is defined as the period of time from the initiation of combustion firing from a "cold start" operating condition to the attainment of steady-state operating condition.

(b) Shutdown is defined as that period of time from the initial lowering of the turbine

output to the complete cessation of fuel combustion in the unit with the intent to shutdown to a "cold stop" condition.

(c) A startup/shutdown cycle is a pair of subsequent shutdown and startup events (i.e., one startup followed by one shutdown represents one startup/shutdown cycle).

(d) Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003, and 326 IAC 2-2 (PSD Requirements), the Permittee shall meet the following startup and shutdown limits:

(1) The maximum number of startup/shutdown cycles shall not exceed 240 per 12 consecutive months period rolled on monthly basis as determined at the end of each calendar month. The duration of each startup/shutdown cycle shall not exceed one (1) hour.

(2) When firing natural gas:

(A) The NO_x emissions per turbine shall not exceed:
(i) 20.7 lbs per each startup
(ii) 11.0 lbs per each shutdown

(B) The CO emissions per turbine shall not exceed:
(i) 65.5 lbs per each startup
(ii) 58.9 lbs per each shutdown

(3) When firing distillate oil:

(A) The NO_x emissions per turbine shall not exceed:
(i) 31.6 lbs per each startup
(ii) 17.5 lbs per each shutdown

(B) The CO emissions per turbine shall not exceed:
(i) 76.4 lbs per each startup
(ii) 65.5 per each shutdown

Change 2:

Condition D.1.19 has been revised as follows to include the record keeping requirements for the new D.1.7 condition:

D.1.19 Record Keeping Requirements

(c) Pursuant to Significant Source Modification 165-15845-00022, issued March 13, 2003, to document compliance with Condition D.1.7, the Permittee shall maintain records of the following:

(1) The type of operation (startup or shutdown) with supporting operational data

(2) The total number of minutes for startup and shutdown per 24-hour period per turbine

(3) The fuel flow meter data and Method 19 calculations corresponding to each startup and shutdown period.

(~~c~~**d**) To document compliance with Condition D.1.17, the Permittee shall maintain records of visible emission notations of the eight (8) combustion turbine stack exhausts once per shift when burning diesel fuel.

(~~d~~**e)** To document compliance with Condition D.1.18, the Permittee shall record the fuel consumption and the ratio of water to fuel being fired in each turbine.

(~~e~~**f**) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Change 3:

Condition D.1.21 has been revised as follows to include the reporting requirements for the startup and shutdown limit. The quarterly report forms have been added at the end of the document.

D.1.21 Reporting Requirements

(d) A quarterly summary of the total number of startup and shutdown hours of operation and emissions corresponding to startup and shutdown to document compliance with Condition D.1.7, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

In addition, upon further review, the OAQ has decided to make the following changes to the Part 70 Operating Permit: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded)**:

Change 1:

In order to avoid confusion for future renewals as to what is the “original” date, IDEM, OAQ is referring to, the following change has been made:

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the ~~original~~ **issuance** date **of this permit**, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

Change 2:

Since Condition B.7(c) (Duty to Supplement and Provide Information) already addresses confidentiality, the last sentence of (b) was revised to remove the statement about confidential information and (c) was updated for clarity as follows:

B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to

IDEM, OAQ, copies of records required to be kept by this permit~~. or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]~~

(c) **For information furnished by the Permittee to IDEM, OAQ, ~~T~~t**he Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

Change 3:

Condition B.11 (Preventive Maintenance Plan) has been revised because it is not necessary to state twice that the PMP does not need to be certified. The statement is more appropriately contained in (c), it has been removed from (a) as follows:

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The ~~PMP and the~~ PMP extension notification do**es** not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change 4:

The requirement to include emergencies in the Quarterly Deviation and Compliance Monitoring Report has been moved from Condition B.15 to Condition B.12. Condition B.12(e) Emergency Provisions has been revised to correct the rule cite and Condition B.12(h) has been added as follows:

B.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(~~10~~**9**) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

~~(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.~~

Change 5:

Condition B.13(g) (Permit Shield) has been revised to correct the rule cite as follows:

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)~~(7)~~**(8)**]

Change 6:

In order to be consistent with 326 IAC 2-7-20(a)(4), the rule cite in Condition B.20(a)(5) has been revised as follows:

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b)**(1)**, (c)(1), and (e)(2).

Change 7:

326 IAC 2-1.1-7 specifies that nonpayment may result in revocation of the permit. This is not specified in 326 IAC 2-7; therefore, this rule cite is being added to Condition B.24. Also, the section and phone number of who the Permittee can contact has been corrected in (c) as follows:

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] **[326 IAC 2-1.1-7]**

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-~~0425~~ **4230**(ask for OAQ, ~~Technical Support and Modeling Section~~ **I/M & Billing Section)**, to determine the appropriate permit fee.

Change 8:

Condition C.1, as well as the table of contents, has been updated to be consistent with the rule revision of 326 IAC 6-3-2 as follows:

C.1 Particulate ~~Matter~~ Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour **[40 CFR 52 Subpart P]** [326 IAC 6-3-2~~(c)~~]

(a) Pursuant to ~~326 IAC 6-3-2(c)~~ **40 CFR 52 Subpart P**, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour. This condition is not federally enforceable.

C SOURCE OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate ~~Matter~~ Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2~~(c)~~**(e)**]

Change 9:

Condition C.8(e) (Asbestos Abatements Projects) has been revised to correct the rule cite.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-~~4~~**1**, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

Change 10:

The following was added to Condition C.10 (Compliance Requirements) to state what IDEM, OAQ does when stack testing, monitoring, or reporting is required to assure compliance with applicable requirements as follows:

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements **by issuing an order under 326 IAC 2-1.1-11.** Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Change 11:

Condition C.12 regarding the maintenance of emission monitoring equipment was revised to clarify that the conditions only apply to continuous emissions monitoring systems, not to other types of

monitoring systems that may be present at a source. Language was added to this condition to clarify that other monitoring requirements that may be present in a D section of the permit do not replace any requirement to operate a continuous emission monitoring system.

In the event of a failure of the Carbon Monoxide monitor, the Permittee shall continuously monitor the Oxygen percent using an Oxygen monitor. The Permittee shall maintain the Oxygen percent within the range established by the most recent stack test that demonstrated compliance with the emission limitations contained in Condition D.1.4. Condition C.12 has also been revised to cite 326 IAC 10-4, the NO_X Budget Trading Program. The changes are as follows:

~~C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]~~

~~(a) The Permittee shall install, calibrate, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.~~

~~(b) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented as required in Section D of this permit until such time as the monitoring equipment is back in operation.~~

~~(c) Nothing in this condition shall excuse the Permittee from complying with the requirements to operate emission monitoring equipment pursuant to 326 IAC 3-5.~~

C.12 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

(b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(c) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or is down for maintenance or repairs, the following shall be used as an alternative to continuous data collection:

(1) If the CEM is required for monitoring NOx emissions pursuant to 40 CFR 75 (Title IV Acid Rain program) or 326 IAC 10-4 (NOX Budget Trading Program), the Permittee shall comply with the relevant requirements of 40 CFR 75 Subpart D - Missing Data Substitution Procedures.

(2) If the CEM is not used to monitor NOx emissions from a unit subject to requirements of the Title IV Acid Rain program or the NO_X Budget Trading Program, and is down for a period of four (4) hours or more, then supplemental or intermittent monitoring of the parameter shall be implemented until such time as the emission monitor system is back in operation.

(d) Whenever the CO continuous emission monitoring system is malfunctioning or down for repairs or adjustments, the Permittee shall use a data substitution procedure for the CO CEMs that is consistent with the requirements of 40 CFR 75.33(b), Standard Missing Data Substitution Procedures for SO_2 Concentration Data.

(e) Nothing in this condition, or in Section D of this permit, shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring equipment system pursuant to 326 IAC 10-4 and 326 IAC 3-5.

Change 12:

IDEM, OAQ has removed Condition D.1.13 since stack testing is not required once every five (5) years in addition to the certification of the CEMS system required once per year by Condition D.1.16(b). All subsequent conditions in Section D have been re-numbered accordingly.

~~D.1.13 Testing Requirements~~

~~(a) Pursuant to 326 IAC 3-5, the Permittee shall conduct a performance test on the combustion turbines' exhaust stacks (designated as # 1- # 8) in order to certify the continuous emission monitoring system for NO_x and CO.~~

~~(1) The compliance stack test for unit CT#1 shall be performed between May 23, 2005 and November 23, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;~~

~~(2) The compliance stack test for unit CT#2 shall be performed between May 31, 2005 and November 31, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;~~

~~(3) The compliance stack test for unit CT#3 shall be performed between May 24, 2005 and November 24, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;~~

~~(4) The compliance stack test for unit CT#4 shall be performed between May 26, 2005 and November 26, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;~~

~~(5) The compliance stack test for unit CT#5 shall be performed between June 1, 2005 and December 1, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;~~

~~(6) The compliance stack test for unit CT#6 shall be performed between May 30, 2005 and November 30, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;~~

~~(7) The compliance stack test for unit CT#7 shall be performed between June 3, 2005 and December 3, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days; and~~

~~(8) The compliance stack test for unit CT#8 shall be performed between June 2, 2005 and December 2, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days.~~

~~(b) IDEM may require compliance testing at any specific time when necessary to determine if the source is in compliance. If testing is required by IDEM, compliance with the SO_2, NO_x and CO limits specified in Conditions D.1.2, D.1.3 and D.1.4, shall be determined by a performance test conducted in accordance with Section C - Performance Testing.~~

Change 13:

Pursuant to 326 IAC 10-4-2(16) the unit is considered an "electricity generating unit (EGU)" because it commenced operation on or after January 1, 1999 and serves a generator at any time that has a nameplate capacity greater than twenty-five (25) megawatts that produces electricity for sale under a firm contract to the electric grid. Pursuant to 326 IAC 10-4-1(a)(1), an "EGU" is a NO_X budget unit. Because this source meets the criteria of having one (1) or more NO_X budget units, it is a NO_X budget source. The Permittee shall be subject to the requirements of this rule. The NOx authorized account representative has already submitted the permit application on February 25, 2002. Therefore, Condition D.1.14 has been added as follows, with all subsequent conditions being re-numbered accordingly.

D.1.14 Nitrogen Oxides Monitoring Requirement [326 IAC 10-4-4(b)(1)] [326 IAC 10-4-12(b) and (c)] [40CFR 75]

The Permittee shall meet the monitoring requirements of 326 IAC 10-4-12(b)(1) through (b)(3) that are applicable to their monitoring systems for the NO_X budget units on or before May 1, 2003. The Permittee shall record, report, and quality assure the data from the monitoring systems on and after May 1, 2003 in accordance with 326 IAC 10-4-12 and 40 CFR 75.

Change 14:

The IDEM, OAQ has revised Conditions D.1.21 and D.2.9 to include that the report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

D.1.21 Reporting Requirements

(c) A quarterly summary of the information to document compliance with Conditions D.1.2 and D.1.3 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. **The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**

D.2.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.2 and D.2.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. **The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**

Change 15:

The Phase II Acid Rain Permit is attached as an Appendix to the Permit. Therefore, Condition E.1 and the Table of Contents have been revised as follows:

E.1 Acid Rain Permit [326 IAC 2-7-5(1)(C)] [326 IAC 21] [40 CFR 72 through 40 CFR 78]

(a) The **attached** Acid Rain permit for this source, AR 165-10727-00022, issued on April 4, 2000, is incorporated by reference into this Part 70 permit. Pursuant to 326 IAC 21 (Acid Deposition Control), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78.

Appendix A: Phase II Acid Rain Permit AR 165-10727-00022

Change 16:

The first box on the Emergency Occurrence Report form was revised to include the word "working" in order to be consistent with 326 IAC 2-7-16(b)(5) and the Emergency Provision.

This form consists of 2 pages **Page 1 of 2**

9 This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (2) **working** days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

Change 17:

The first sentence in the Quarterly Deviation and Compliance Monitoring Report turned the quarterly report on deviations into a compliance certification. That poses a conflict with the provisions that require an annual certification. Therefore, the sentence has been deleted from the Quarterly Deviation and Compliance Monitoring Report as follows:

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Page 1 of 2

This report ~~is an affirmation that the source has met all the requirements stated in this permit. This report~~ shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: Two (2) emergency diesel generators
Parameter: Diesel fuel usage
Limit: ~~6,026~~ **6,029** gallons per day, equivalent to ~~0.434~~ **0.435** tons of SO_2 total per year.

Month: _____ Year: _____

Day	Diesel Fuel Oil Usage This Day (gallons)	Day	Diesel Fuel Oil Usage This Day (gallons)
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16		no. of deviations	

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Duke Energy Vermillion, L.L.C.
Source Address: SW Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Mailing Address: c/o Steven F. Gilliland 5400 Westheimer Court, Houston, TX 77056-5310
Part 70 Permit No.: T 165-14185-00022
Facilities: Two (2) emergency diesel generators
Parameter: Diesel fuel usage
Limit: ~~251,090~~ **125,620** gallons per twelve (12) consecutive month period, equivalent to 27.5 tons of NO_X total per year.

YEAR: _____

Month	Diesel Fuel Oil Usage This Month (gallons)	Diesel Fuel Oil Usage for Previous 11 Months (gallons)	Diesel Fuel Oil Usage for Twelve-Month Period (gallons)

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section and Vermillion County Air Pollution Control
Quarterly Report

Company Name: Duke Energy Vermillion Generating Station
Location: CR 300N and SR 63 Eugene Township, IN 47928
Permit No.: CP-083-15845-00022
Source: Eight (8) natural gas combustion turbines operating in simple cycle
Limit: 240 hour startups/shutdowns per 12 consecutive month period.

Month:_____ Year _____
Total from previous month(s) Startup_____ Shutdown_____
Total hours per year for startup and shutdown for 12 month period

	Startup / Shutdown									Startup / Shutdown							
Day/ Turbine	1	2	3	4	5	6	7	8	Day/ Turbine	1	2	3	4	5	6	7	8
1									17								
2									18								
3									19								
4									20								
5									21								
6									22								
7									23								
8									24								
9									25								
10									26								
11									27								
12									28								
13									29								
14									30								
15									31								
16									Total								

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality
Compliance Data Section and Vermillion County Air Pollution Control
Quarterly Report

Company Name: Duke Energy Vermillion Generating Station
Location: CR 300N and SR 63 Eugene Township, IN 47928
Permit No.: CP-083-15845-00022
Source: Eight (8) natural gas combustion turbines operating in simple cycle
Limit: Nat. Gas per turbine: NOx- 20.7 lb/startup &11.0 lb/shutdown; CO- 65.5 lb/startup & 58.9 lb/ shutdown
Diesel per turbine: NO_x- 31.6 lb/ startup & 17.5 lb/ shutdown; CO- 76.4 lb/ startup &65.5 lb/ shutdown

Month: Year _____
Total from previous month(s) Startup_____ Shutdown_____
Total hours per year for startup and shutdown for 12 month period

	Startup / Shutdown									Startup / Shutdown							
Day/ Turbine	1	2	3	4	5	6	7	8	Day/ Turbine	1	2	3	4	5	6	7	8
1									17								
2									18								
3									19								
4									20								
5									21								
6									22								
7									23								
8									24								
9									25								
10									26								
11									27								
12									28								
13									29								
14									30								
15									31								
16									Total								

9 No deviation occurred in this month
9 Deviation/s occurred in this month.
9 Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	**Duke Energy Vermillion, L.L.C.**
Source Location:	**Southwest Quadrant of Intersection CR300N and SR63, Eugene Township, IN 47928**
County:	**Vermillion**
SIC Code:	**4911**
Operation Permit No.:	**T 165-14185-00022**
Permit Reviewer:	**Craig J. Friederich**

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Duke Energy Vermillion, L.L.C. relating to the operation of a 640 MW merchant power plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, utilizing diesel fuel as back-up fuel, controlled by low-NO_X combustors in conjunction with natural gas usage, controlled by wet-injection in conjunction with diesel fuel usage, exhausting to stacks designated as # 1- # 8,with a maximum heat input capacity of 1,272 million British thermal units per hour each, and a nominal output of 80 MW, each.

(b) Two (2) emergency diesel generators, identified as units #9 and #10, installed in 2000, exhausting to stacks designated as #9 and #10, with a maximum heat input capacity of 17.21 million British thermal units per hour, each.

(c) One (1) emergency diesel fire pump, identified as unit #11, installed in 2000, exhausting to stack designated as #11, with a maximum heat input capacity of 1.6 million British thermal units per hour.

(d) Four (4) diesel fuel storage tanks, identified as tanks #1 through #4, exhausting to vents designated as #12 through #15, with a maximum capacity of 519,000 gallons of diesel fuel per tank, and a maximum volume of 69,400 cubic feet per tank.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

There are no new facilities proposed at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) The following VOC and HAP storage containers: storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(b) Closed loop heating and cooling systems.

(c) Paved and unpaved roads and parking lots with public access. (326 IAC 6-4)

(d) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate; ammonia; and sulfur trioxide.

(e) Other emergency equipment as follows: stationary fire pumps.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP 165-10476-00022, issued on July 1,1999;

(b) AR 165-10727-00022, issued on April 4, 2000;

(c) MPR 165-11417-00022, issued on February 25, 2000;

(d) SPM 165-11904-00022, issued on May 30, 2000; and

(e) AAT 165-15533-00022, issued on May 2, 2002.

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

MPR 165-11417-00022, issued on February 25, 2000.

Condition D.1.9: Condition D.1.9 contained a diesel fuel usage limitation of 3,014.7 gallons per day and a 125,600 gallons per twelve (12) consecutive month period, rolled on a monthly basis, for the two (2) emergency diesel generators.

Reason not incorporated: The calculation of the fuel usage limitation of 3,014.7 gallons per day and the 125,600 gallons per twelve (12) consecutive month period, rolled on a monthly basis, for the two (2) emergency diesel generators, rated at 17.2 million British thermal units per hour, each, was incorrect. This calculation was for only one (1) emergency diesel generator rated at 17.2 million British thermal units per hour. This change does not result in any change to the limited potential to emit for these generators. The calculation has been corrected to allow for both generators as follows:

Daily limit calculation:

34.4 mmBtu/hr /0.137 mmBtu/gal = 251.09 gallons per hour X 24 hours/day=
6,026 gallons per day.

Twelve (12) consecutive month period limit calculation:

251.09 gallons per hour X 1000 hours of operation per year (500 hours for each generator)= 251,090 gallons per twelve (12) consecutive month period rolled on a monthly basis.

Please note that the equivalency, in tons per year, of SO_2 when limited at the two (2) emergency diesel fired generators, should be 0.434 tons per year. CP 165-10476-00022, issued on July 1, 1999, showed equivalent emissions of 0.4 tons of SO_2 per year. MPR 165-11417-00022, issued on February 25, 2000, showed the equivalent emissions of 0.40 tons per year. Based on the standard number of significant figures, the correct equivalency for these two (2) generators, when operating at 1000 hours per year total (500 hours per year each), and burning 251,090 gallons per twelve (12) consecutive month period rolled on a monthly basis), is 0.434 tons per year of SO_2.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justifications such that the low-NO_X combustors be considered as an integral part of the turbines:

The combustor is an integral part of the combustion turbines located at the source. The combustion section of the unit is where fuel is introduced, ignited and burned. Without the combustor, the turbine could not operate. Based on this information, the low-NO_X combustors are considered integral to the turbines.

Pursuant to CP 165-10476-00022, issued on July 1, 1999, the IDEM, OAQ has evaluated the justifications and agreed that the low-NO_X combustors will be considered as an integral part of the turbines. Therefore, the permitting level will be determined using the potential emissions after the low-NO_X combustors. Operating conditions will be specified in the proposed permit that this low-NO_X combustors shall operate at all times when the turbines are in operation.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on March 20, 2001. Additional information was received on January 8, 2002.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A (pages 1 through 3 of 3) of this document for detailed emissions calculations for the two (2) emergency diesel generators, the one (1) emergency fire pump, and Hazardous Air Pollutant (HAPS) calculations.

Emissions from the storage tanks are based upon emissions submitted by the applicant based on the TANKS 4.0 program. These emissions were accepted by the IDEM/OAQ.

Emissions for the turbines are based on the site area temperature when operating (for natural gas based on 57EF and diesel fuel oil based on -23EF) and worst case operating conditions (information supplied by the General Electric vendor). Compliance shall be demonstrated by use of a continuous monitoring system for CO and NO_X. Compliance for SO_2 shall be demonstrated by utilizing 40 CFR Part 75, Appendix D. The following calculations are the same as in CP 165-10476-00022, issued on July 1, 1999. Please note that the worst case emissions calculations are based on data from GE dated 1998. These pound per hour emission factors have been accepted by the IDEM, OAQ, pursuant to CP 165-10476-00022, issued on July 1, 1999.

Potential To Emit of Eight (8) Combustion Turbines

NO_X - Worst case emissions are based using diesel fuel oil (-23°F) at all times
196.0 pounds of NO_X per hour per turbine *8760 hours per year * ton/2000 pounds = 858.48 tons per year per turbine.
858.48 tons per year per turbine * 8 (total number of turbines) = **6,867.84 tons per year**.

CO - Worst case emissions are based using natural gas at all times.
54.0 pounds of CO per hour per turbine* 8760 hours per year * ton/2000 pounds = 236.52 tons per year per turbine.
236.52 tons per year per turbine * 8 (total number of turbines) = **1,892.16 tons per year**.

SO_2 - Worst case emissions are based using diesel fuel oil at all times.
58.0 pounds of SO_2 per hour per turbine * 8760 hours per year * ton/2000 pounds = 254.04 tons per year per turbine.
254.04 tons per year per turbine * 8 (total number of turbines) = **2,032.32 tons per year**.

VOC - Worst case emissions are based using diesel fuel oil at all times.
10.0 pounds of VOC per hour per turbine * 8760 hours per year * ton/2000 pounds = 43.8 tons per year per turbine.
43.8 tons per year per turbine * 8 (total number of turbines) = **350.4 tons per year**.

PM/PM_{10} - Worst case emissions are based using diesel fuel oil at all times.
10.0 pounds of PM/PM_{10} per hour per turbine * 8760 hours per year * ton/2000 pounds = 43.8 tons per year per turbine.
43.8 tons per year per turbine * 8 (total number of turbines) = **350.4 tons per year**.

Limited Potential to Emit of the Eight (8) Combustion Turbines

The limited potential to emit of the eight (8) combustion turbines is based on 2,500 hours per year (2,000 hours in conjunction with natural gas and 500 hours in conjunction with diesel fuel)

NO_X - (42.6 pounds per hour * 2,000 hours per year * ton/2,000 lb) + (196.0 pounds per hour * 500 hours per year * ton/2000 lb) = 91.6 tons per year per turbine
91.6 tons per year per turbine * 8 (total number of turbines) = **732.8 tons per year**.

SO_2 - (0.6 pounds per hour * 2,000 hours per year * ton/2,000 lb + (58.0 pounds per hour * 500 hours per year * ton/2,000 lb) = 15.1 tons per year per turbine
15.1 tons per year per turbine * 8 (total number of turbines) = **120.8 tons per year**.

CO - (54.0 pounds per hour * 2,500 hours per year * ton/2,000 lb) =
67.5 tons per year per turbine (worst case natural gas)
67.5 tons per year per turbine * 8 (total number of turbines) = **540.0 tons per year**.

VOC - (2.06 pounds per hour * 2,000 hours per year * ton/2,000 lb) + (10.0 pounds per hour * 500 hours per year * ton/2,000 lb) = 4.56 tons per year per turbine
4.56 tons per year per turbine * 8 (total number of turbines) = **36.5 tons per year**.

PM/PM_{10} - (5.0 pounds per hour * 2,000 hours per year * ton/2,000 lb) + (10.0 pounds per hour * 500 hours per year * ton/2,000 lb) = 7.5 tons per year per turbine
7.5 tons per year per turbine * 8 (total number of turbines) = **60.0 tons per year**.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	**Potential To Emit** (tons/year)
PM	352.2
PM_{10}	351.8
SO_2	2,032.7
VOC	352.3
CO	1,900
NO_X	6,897

Note: For the purpose of determining Title V applicability for particulates, PM_{10}, not PM, is the regulated pollutant in consideration.

HAPs	**Potential To Emit** (tons/year)
1,3 Butadiene	0.713
Acetaldehyde	1.78
Acrolein	0.285
Benzene	2.45
Ethyl benzene	1.43
Formaldehyde	31.7
Naphthalene	1.56

HAPs	Potential To Emit (tons/year)
PAH	1.78
Propylene Oxide	1.29
Toluene	5.79
Xylenes	2.85
Arsenic	0.490
Beryllium	1.38
Cadmium	0.214
Chromium	0.490
Lead	6.24
Manganese	35.2
Mercury	0.053
Nickel	0.205
Selenium	1.11
TOTAL	97.0

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all criteria pollutants are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPS is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2000 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	25.0
PM_{10}	25.0

Pollutant	Actual Emissions (tons/year)
SO_2	1.00
VOC	22.0
CO	203
NO_X	47.0
HAP (specify)	not available

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 Operating Permit.

	Limited Potential to Emit (tons/year)						
Process/facility	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPSs**
Eight (8) Simple Cycle Turbines	60.0	60.0	121	36.5	540	733	16.0
Four (4) diesel fuel storage tanks	--	--	--	0.640	--	--	negligible
Two (2) Emergency Diesel Generators	0.860	0.493	0.434	0.774	7.31	27.5	0.00
One (1) Emergency Diesel Fire pump	0.040	0.023	0.020	0.036	0.342	1.29	0.00
Insignificant Activities	1.00	1.00	--	0.500	--	--	negligible
Total Emissions	61.9	61.5	122	38.5	548	762	16.0

Notes: The limited potential to emit NO_X , PM_{10}, SO_2, and VOC from the eight (8) combustion turbines is based on 2,500 hours per year (2,000 hours in conjunction with natural gas and 500 hours in conjunction with diesel fuel).

The limited potential to emit CO from the eight (8) combustion turbines is based on 2,500 hours per year in conjunction with natural gas.

County Attainment Status

The source is located in Vermillion County.

Pollutant	Status
PM_{10}	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Vermillion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Vermillion County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

(a) The eight (8) combustion turbines are subject to 40 CFR Part 60, Subpart GG because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.

Pursuant to 326 IAC 12-1 and 40 CFR 60, Subpart GG (Stationary Gas Turbines), the Permittee shall:

(1) limit nitrogen oxides emissions, as required by 40 CFR 60.332, to:

$$STD = 0.0075 \frac{(14.4)}{Y} + F,$$

where STD = allowable NO_x emissions (percent by volume at 15 percent oxygen on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peck load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of 40 CFR 60.332.

(2) Operate a Continuous Monitoring System to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine as required by 40 CFR 60.334(a);

(3) limit sulfur dioxide emissions, as required by 40 CFR 60.333, to 0.015 percent by volume at fifteen (15) percent oxygen on a dry basis, or use natural gas fuel with a sulfur content less than or equal to 0.8 percent by weight;

(4) Report periods of excess emissions, as required by 40 CFR 60.334(c).

The Permittee must comply with the following custom fuel monitoring schedule approved by the U.S. EPA on May 30, 2000:

(5) Monitor the sulfur content of the natural gas being fired in the turbine by ASTM method D 5504-94.

(6) Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.

As soon as the Permittee installs the equipment capable of using low sulfur (0.05%) distillate oil as the backup fuel, monitoring of fuel nitrogen content will be required pursuant to 40 CFR 60.334(b).

(7) Sulfur Monitoring

(A) Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2). The approved alterative method is ASTM Method D5504-94.

(B) Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted one per quarter for six quarters.

(C) If after the monitoring required in item 7(B) above, or herein, the sulfur content of the fuel shows little variability and calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third

quarters of each calendar year.

(D) Should any sulfur analysis as required in items 7(B) or 7(C) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the U.S. EPA Region V Air and Radiation Division of such excess emissions and the custom schedule shall be re-examined by the U.S. EPA. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

(8) If there is change in fuel supply, the owner or operator must notify the EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

(9) Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state and local air pollution control agencies.

(b) The four (4) diesel fuel storage tanks, identified as tanks #1 through #4 are subject to 40 CFR Part 60, Subpart Kb because the maximum capacity of each is greater than forty (40) m^3 that is used to store volatile organic liquids (including petroleum) for which construction, reconstruction, or modification commenced after July 23, 1984.

The tanks are exempt from the General Provisions (Part 60, Subpart A) and from the provisions of this subpart because the tanks have a capacity greater than or equal to 151 m^3, storing liquid with a maximum true vapor pressure less than 3.5 kPa.

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall:

(1) maintain the records of the volatile organic liquid (VOL) stored;

(2) the period of storage;

(3) the maximum true vapor pressure of the volatile organic liquid (VOL) during the respective storage period;

(4) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel;

(5) shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. (Available data on the storage temperature may be used to determine the maximum vapor pressure as determined in 40 CFR Part 60.117b (e)(1)-(3))

(c) This source is subject to the requirements of 40 CFR Part 72 through 80 (Acid Rain Program). The requirements of this program shall be detailed in the Acid Rain, Phase II Permit. The source received their Acid Rain, Phase II permit on April 4, 2000.

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on September 11, 2000. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 1-7 (Stack Height Provisions):

Stacks #1 through #8 are subject to the requirements of 326 IAC 1-7 (Stack Height Provisions) because the potential emissions which exhaust through the above mentioned stacks, are greater than twenty-five (25) tons per year of PM and SO_2 . This rule requires that the stack be constructed using Good Engineering Practice (GEP), unless field studies or other methods of modeling show to the satisfaction of IDEM that no excessive ground level concentrations, due to less than adequate stack height, will result.

326 IAC 2-2 (Prevention of Significant Deterioration):

This source is subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) for emissions of PM, PM_{10}, VOC, SO_2, CO, NO_X , Be and H_2SO_4, because the potential to emit for these pollutants exceed the PSD major "significant" thresholds. This source has gone through PSD review under CP 165-10476-00022, issued on July 1,1999.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of CO and NO_X. Pursuant to this rule, the owner/ operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

326 IAC 3-5 (Continuous Monitoring of Emissions):

(a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a source with an emission limitation or permit requirement established under 326 IAC 2-1-3(i)(8) shall be required to install a continuous emissions monitoring system or alternative monitoring plan as allowed under the Clean Air Act and 326 IAC 3-5.

(b) For NO_X and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous monitoring system for stacks designated as # 1- # 8 in accordance with 326 IAC 3-5-2 and 3-5-3.

(1) The Continuous Emission Monitoring System (CEMS) shall measure NO_X and CO emissions rates in parts per million (ppmvd). The use of CEMS to measure and record the NO_X and CO hourly limits, is sufficient to demonstrate compliance with the fifteen (15) parts per million (ppmvd) NO_X limit and forty-two (42) parts per million (ppmvd) CO PSD BACT limits. To demonstrate compliance with the twelve (12) parts per million (ppmvd) of NO_X annual limit, the source shall take an average of the parts per million (ppmvd) over a twelve (12) consecutive month period. The source shall maintain records of the parts per million emission rates of NO_X and CO obtained from the CEMS data.

(2) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7. The source shall also be required to maintain records of the amount of natural gas combusted per turbine on a monthly basis and the heat input capacity.

(c) The Permittee shall follow parametric monitoring requirements for determining SO_2 emissions contained in the "*Optional SO_2 Emissions Data Protocol for Gas-Fired and Oil-Fired Units"* in lieu of continue monitoring emissions monitors (CEMS).

(1) Pursuant to the procedures contained in 40 CFR 75.20, the Permittee shall complete all testing requirements to certify the use of the *"Optional SO_2 Emissions Data Protocol for Gas-Fired and Oil-Fired Units"* protocol.

(2) The Permittee shall apply to IDEM for initial certification to use the *"Optional* SO_2 *Emissions Data Protocol for Gas-Fired and Oil-Fired Units"* protocol, no later than 45 days after the compliance of all certification tests. The initial plan was received by the IDEM/OAQ on March 7, 2000.

(3) All certification and compliance methods shall be conducted in accordance with the procedures outlined in 40 CFR Part 75, Appendix D.

(4) The source shall maintain records of the sulfur content of the diesel oil, the amount oil combusted per turbine on a monthly basis, and the heat input capacity.

Compliance with this condition shall determine continuous compliance with the NO_X, CO, and SO_2 emission limits established under the PSD BACT(326 IAC 2-2).

326 IAC 5-1 (Opacity Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR Part 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-2-3 (Nitrogen Oxides (NO_X) Best Available Control Technology)

(a) For the eight (8) combustion turbines, the source shall comply with the following BACT pursuant to CP 165-10476-00022:

(1) Use dry low-NO_X combustors in conjunction with natural gas;

(2) Use wet-injection in conjunction with diesel fuel;

(3) When burning natural gas, the NO_X emission rate shall not exceed a one (1) hour average concentration of fifteen (15) parts per million (ppmvd) of NO_X at fifteen (15) percent O_2 in conjunction with dry low-NO_X combustors;

(4) When burning natural gas, the NO_X emission rate shall not exceed twelve (12) parts per million (ppmvd) of NO_X per year based over twelve (12) consecutive months of operation at fifteen (15) percent O_2 in conjunction with dry low-NO_X combustors;

(5) When burning diesel fuel, the NO_X emission rate shall not exceed a one (1) hour average concentration of forty-two (42) parts per million (ppmvd) of NO_X at fifteen (15) percent O_2 in conjunction with wet-injection;

(6) The total input of the natural gas fuel to the eight (8) combustion turbines shall be limited to 20,336 million cubic feet per twelve consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 426.0 tons of NO_X per year. If diesel fuel oil is combusted during any portion of a twelve (12) consecutive month period, natural gas usage shall be reduced such that NO_X emissions for the eight (8) turbines do not exceed 732.8 tons per year for gas and oil firing combined, as determined by CEMS.

(b) For the two (2) emergency diesel generators, the source shall comply to the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

The source shall perform good combustion practices.

326 IAC 2-2-3 (Sulfur Dioxide (SO_2) Best Available Control Technology)

(a) For the eight (8) combustion turbines, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(1) Use natural gas as the primary fuel for the combustion turbines;

(2) The sulfur content of the diesel fuel used by the combustion turbines shall not exceed 0.05 percent by weight; and

(3) Use only diesel fuel oil as a back-up fuel source. The total input of the diesel fuel to the eight (8) combustion turbines shall be limited to 34,000 kilo-gallons per twelve (12) consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 116.0 tons of SO_2 per year and 392.0 tons of NO_X per year.

(b) For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(1) Perform good combustion practices;

(2) The sulfur content of the diesel fuel used by the generators shall not exceed 0.05 percent by weight; and

(3) The total input of the diesel fuel to the generators shall be limited to 6,026 gallons per day and shall not exceed a total of 251,090 gallons per twelve (12) consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 0.434 tons of SO_2 per year and 27.5 tons of NO_X per year.

326 IAC 2-2-3 (Carbon Monoxide (CO) Best Available Control Technology)

(a) For the eight (8) combustion turbines, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(1) Combustion control maintaining the following emission limits:

(A) The CO emission rate shall not exceed a one (1) hour average concentration of twenty-five (25) parts per million (ppmvd) of CO at fifteen (15) percent O_2 in conjunction with firing natural gas at operating loads above fifty (50) percent; and

(B) The CO emission rate shall not exceed a one (1) hour average concentration of twenty (20) parts per million (ppmvd) of CO at fifteen (15) percent O_2 in conjunction with firing diesel fuel at operating loads above fifty (50) percent.

(2) Perform good combustion practices.

(b) For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

The source shall perform good combustion practices.

326 IAC 2-2-3 (Particulate Matter (PM/PM_{10}) Best Available Control Technology)

(a) For the eight (8) combustion turbines, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(1) Natural gas as primary fuel;

(2) Limit diesel fuel as established under the SO_2 BACT analysis; and

(3) Perform good combustion practices.

(b) For the two (2) emergency diesel generators, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(1) The limit of diesel fuel established under the SO_2 BACT analysis; and

(2) Perform good combustion practices.

326 IAC 2-2-3 (Volatile Organic Compound (VOC) Best Available Control Technology)

For the eight (8) combustion turbines, the source shall comply with the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

Perform good combustion practices.

326 IAC 2-2-3 (Non-Criteria PSD Pollutants (Beryllium and H_2SO4) Best Available Control Technology)

For the eight (8) combustion turbines, the source shall comply to the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(a) Use natural gas as the primary fuel for the combustion turbines;

(b) The sulfur content of the diesel fuel used by the combustion turbines shall not exceed 0.05 percent by weight; and

(c) Perform good combustion practices.

326 IAC 2-2-3 (Best Available Control Technology)

For the one (1) emergency diesel fire pump, the source shall comply to the following BACT pursuant to CP 165-10476-00022, issued July 1, 1999:

(a) Perform good combustion practices;

(b) The sulfur content of the diesel fuel used by the fire pump shall not exceed 0.05 percent by weight; and

(c) The total input of the diesel fuel to the fire pump shall be limited to 5,840 gallons per twelve (12) consecutive month period, rolled on a monthly basis.

326 IAC 2-4.1-1 (New Source Toxics Control)

The eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, the two (2) Emergency diesel generators, identified as units #9 and #10, installed in 2000, and the one (1) emergency diesel fire pump, identified as unit #11, installed in 2000, are not subject to the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) because the potential to emit each individual hazardous air pollutant (HAP) is less than ten (10) tons per year and the potential to emit total HAPS is less than a total of twenty-five (25) tons per year, from each unit.

326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983)

The eight (8) simple cycle, natural gas-fired combustion turbines, identified as units CT#1 through CT#8, installed in 1999, the two (2) Emergency diesel generators, identified as units #9 and #10, installed in 2000, and the one (1) emergency diesel fire pump, identified as unit #11, installed in 2000, are not subject to the requirements of 326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983) because these combustion units are not used for indirect heating.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

Since the potential to emit sulfur dioxide exceeds twenty-five (25) tons per year for each of the eight (8) simple cycle, natural gas-fired combustion turbines, utilizing diesel fuel as back-up, identified as units CT#1 through CT#8, each will be subject to 326 IAC 7-1.1. Pursuant to 326 IAC 7-1.1, sulfur dioxide (SO_2) emissions from each turbine when burning diesel fuel shall be limited to 0.5 pounds per million British thermal units heat input.

326 IAC 7-4-8 (Sulfur Dioxide Emission Limitations: Vermillion County)

This source is not subject to the requirements of 326 IAC 7-4-8 (Sulfur Dioxide Emission Limitations: Vermillion County) because even though it is located in Vermillion county it is not one of the listed sources pursuant to this rule.

326 IAC 8-1-6 (New facilities; general reduction requirements):

Pursuant to 326 IAC 8-1-6 (New facilities; general reduction requirements), the requirements of BACT shall apply to each turbine because the potential to emit of VOC is greater than or equal to twenty-five (25) tons per year per unit. The requirements of 326 IAC 8-1-6 have been met through the PSD BACT Review (326 IAC 2-2-3). Pursuant to CP 165-10476-00022, issued July 1, 1999, the source shall also perform good combustion practices as BACT.

326 IAC 9-1 (Carbon Monoxide Emission Limits):

This source is subject to 326 IAC 9-1 because it is a stationary source of CO emissions commencing operation after March 21, 1972. There are no applicable CO emission limits, under this state rule, established for this type of operation.

Testing Requirements

All testing requirements from previous approvals were incorporated into this Part 70 operating permit:

(a) The compliance stack test for unit CT#1 shall be performed between May 23, 2005 and November 23, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;

(b) The compliance stack test for unit CT#2 shall be performed between May 31, 2005 and November 31, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;

(c) The compliance stack test for unit CT#3 shall be performed between May 24, 2005 and November 24, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;

(d) The compliance stack test for unit CT#4 shall be performed between May 26, 2005 and November 26, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;

(e) The compliance stack test for unit CT#5 shall be performed between June 1, 2005 and December 1, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;

(f) The compliance stack test for unit CT#6 shall be performed between May 30, 2005 and November 30, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days;

(g) The compliance stack test for unit CT#7 shall be performed between June 3, 2005 and December 3, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days; and

(h) The compliance stack test for unit CT#8 shall be performed between June 2, 2005 and December 2, 2005 which corresponds to five (5) years since the latest valid stack test plus one hundred and eighty (180) days.

These testing requirements are necessary to demonstrate compliance with 326 IAC 3-5 and to certify the Continuous Emission Monitoring System (CEMS) for NO_X and CO. These tests shall be

performed according to 40 CFR 60, Appendix A, Methods 25 and 25A.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

(a) The compliance monitoring requirements applicable to the eight (8) simple cycle combustion turbines, identified as units CT#1 through CT#8, are outlined under Federal Rule applicability requirements for Subpart GG, listed above, and State Rule applicability for 326 IAC 3-5, listed above.

(b) The eight (8) simple cycle combustion turbines, identified as units CT#1 through CT#8, have additional applicable compliance monitoring conditions as specified below:

(1) Visible emission notations of the combustion turbine stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere when burning diesel fuel. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

(2) Pursuant to NSPS Subpart GG, the Permittee shall operate a Continuous Monitoring System to monitor and record the fuel consumption and the ratio of water to fuel being fired in each turbine.

Conclusion

The operation of this 640 MW merchant power plant shall be subject to the conditions of the attached proposed **Part 70 Permit No. T 165-14185-00022.**

Appendix A: Emissions Calculations
HAP Potential Emissions

Company Name: Duke Energy Vermillion, L.L.C.
Address City IN Zip: Southwest Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928
Part 70: T 165-14185
Plt ID: 165-00022
Reviewer: Craig J. Friederich
Date: March 20, 2001

Total Limited HAPs
Assuming Worst Case

Eight (8)Turbines with a heat capacity of 1,272 MMBtu/hr, each on diesel, and
Eight (8)Turbines with a heat capacity of 1,178 MMBtu/hr, each on natural gas

Pollutant	Emission Factor (lb/MMBtu)	Emission Rate per Turbine (lbs/hr)	Emission Rate per Turbine (ton/yr)	Total Emissions (CT-1-CT-8) (tons/yr)	Per Turbine (tons/yr)	Total for Eight Turbines (tons/yr)
Natural Gas						
1,3 Butadiene	less than 4.3E-7	0.001	0.002	0.018	0.001	0.004
Acetaldehyde	4.000E-05	0.047	0.206	1.65	0.059	0.471
Acrolein	6.400E-06	0.008	0.033	0.264	0.009	0.075
Benzene	1.200E-05	0.014	0.062	0.495	0.014	0.113
Ethylbenzene	3.200E-05	0.038	0.165	1.32	0.047	0.377
Formaldehyde	7.100E-04	0.836	3.66	29.3	1.045	8.36
Naphthalene	1.300E-06	0.002	0.007	0.054	0.002	0.012
PAH	2.200E-06	0.003	0.011	0.091	0.003	0.021
Propylene Oxide	less than 2.9E-05	0.034	0.150	1.20	0.043	0.342
Toluene	1.300E-04	0.153	0.671	5.37	0.191	1.53
Xylenes	6.400E-05	0.075	0.330	2.64	0.094	0.754
Diesel Fuel						
1,3 Butadiene	less than 1.6E-05	0.020	0.089	0.713	0.005	0.041
Benzene	5.500E-05	0.070	0.306	2.45	0.017	0.140
Formaldehyde	2.800E-04	0.356	1.56	12.5	* NG Worst	0.000
Naphthalene	3.500E-05	0.045	0.195	1.56	0.011	0.089
PAH	4.000E-05	0.051	0.223	1.78	0.013	0.102
Arsenic	less than 1.1E-05	0.014	0.061	0.490	0.003	0.028
Beryllium	less than 3.1E-07	0.000	0.002	0.014	0.0001	0.001
Cadmium	4.800E-06	0.006	0.027	0.214	0.002	0.012
Chromium	1.100E-05	0.014	0.061	0.490	0.003	0.028
Lead	1.400E-05	0.018	0.078	0.624	0.004	0.036
Manganese	7.900E-04	1.00	4.40	35.2	0.251	2.01
Mercury	1.200E-06	0.002	0.007	0.053	0.000	0.003
Nickel	less than 4.6E-06	0.006	0.026	0.205	0.001	0.012
Selenium	less than 2.5E-05	0.032	0.139	1.11	0.008	0.064
Total		**2.85**	**12.5**	**86.7**	**1.83**	**14.6**

Methodology

The emission rate is based on AP-42 Chapter 3.1 Emission Factors

Note: Limited HAPS Worst case= Total 2,500 hours per year with no more than 500 hours per year on diesel oil.

Company Name: **Duke Energy Vermillion, L.L.C.**
Address City IN Zip: **Southwest Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928**
Part 70: **T 165-14185**
Plt ID: **165-00022**
Reviewer: **Craig J. Friederich**
Date: **March 20, 2001**

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity
MMBtu/hr
2 generators rated at 17.2 each
34.4

S= 0.05 = WEIGHT % SULFUR

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.1	0.0573	0.1 *(1.01S)*	3.2 **see below	0.1	0.85
Potential Emission in tons/yr	0.860	0.493	0.434	27.5	0.774	7.31

**NOx emissions: uncontrolled = 3.2 lb/MMBtu, controlled with ignition timing retard = 1.9 lb/MMBtu

Methodology
Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1 and Table 3.4-2

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 500 hr/yr / (2,000 lb/ton)

Company Name: **Duke Energy Vermillion, L.L.C.**
Address City IN Zip: **Southwest Quadrant of Intersection of CR300N and SR63, Eugene Township, IN 47928**
Part 70: **T 165-14185**
Plt ID: **165-00022**
Reviewer: **Craig J. Friederich**
Date: **March 20, 2001**

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity
MMBtu/hr

1.6

S= 0.05 = WEIGHT % SULFUR

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.1	0.0573	0.1 *(1.01S)*	3.2 **see below	0.1	0.85
Potential Emission in tons/yr	0.040	0.023	0.020	1.29	0.036	0.342

**NOx emissions: uncontrolled = 3.2 lb/MMBtu, controlled with ignition timing retard = 1.9 lb/MMBtu

Methodology
Emission Factors are from AP 42 (Supplement B 10/96)Table 3.4-1 and Table 3.4-2

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 500 hr/yr / (2,000 lb/ton)